

I am commenting on Docket 04-37 (BPL) as an Extra-Class licensed radio amateur and as a communications engineer (retired) with graduate degrees in Electrical Engineering from MIT.

The current BPL proposals represent a striking mismatch between benefits and problems. Other approaches to broadband internet access such as fiber to homes have far more potential and no interference problem. As an example, on the benefit side, the comment at par. 30 that "Access BPL technology could play an important role in providing high-speed Internet and broadband services to rural and remote areas of the country" is simply not credible at all: distances between subscribers in rural/remote areas would make BPL uneconomic if even practical. On the problem side: the HF spectrum is a unique resource, the ONLY way to provide long-distance communications with no intervening infrastructure. It seems bad policy to endanger the usefulness of this unique resource for the highly debatable benefits claimed for BPL. Power lines are indeed ubiquitous as the docket says, but the laws of physics make them singularly unsuited to carry 2-80 MHz signals, much less to carry them without significant radiated interference.

Claim is made at par. 31 that "interference concerns can be adequately addressed". However, the rest of the docket provides very little confidence that this can be done, or that the interference mitigation requirements outlined will be adequate. In particular, the comments in par. 35 re amateurs orienting their antennas to avoid emissions from nearby electric power lines were written by someone with no understanding of amateur operation whatsoever: amateurs must in fact orient their antennas in the direction of the weak signals to be received, whether there are power lines nearby or not. This level of misunderstanding casts doubt on the assertions re the interference problem in the rest of the docket.

If actual BPL operation goes forward, far more specifics re interference mitigation are required. At minimum:

- => A publicly-accessible database(s) of BPL system parameters must be mandated, not just suggested or assumed, with BPL operators required to keep the data current and with effective penalties for not doing so.
- => Performance standards for mitigation of interference from BPL systems must be established, with severe enforcement penalties when complaints are not resolved in real time.
- => A method of mitigating interference to mobile stations must be established. This will probably require a lower limit on radiated emissions than the current one.
- => Testing of BPL systems for rules compliance by an independent laboratory must be required prior to initiation of service.
- => BPL service providers must give clear notice to prospective customers that their operation is under Part 15 so that licensed radio services have priority, that any interference from such licensed services must be accepted without recourse, that

interference to licensed services may require shutdown or reduced data rate, and that therefore delivery of Internet access or other service via BPL cannot be assured or guaranteed. Receipt of such notice must be acknowledged in writing by the customer prior to signing any contract for BPL service.

Docket 04-37 makes no mention of the last point addressed above, i.e. interference TO access BPL systems FROM licensed radio services. Everything I know about radio engineering and amateur radio operation convinces me that the potential for such interference is considerable. It is clear that most of the general public and thus nearly every potential BPL customer has never heard of Part 15 and would have no understanding whatever of the principle of the primacy of licensed radio services, whether amateur, government, or public service. This serious problem has been consistently ignored by all proponents of BPL.